

A1
Canc.

sampling the amplifier output by an analog-to-digital converter at a time delay following the unblank-blank period determined by the video amplifier bandwidth; arranging the successive samples for giving a video profile representative of the video profile of a slow scan with a wide beam; and mathematically processing the representative video profile to yield the position of the video edge with respect to the scan.

A2

4. **(amended)** In an electron beam equipment, a method for determining the dimensions of the scan of the electron beam by identifying a feature on the sample and the position of the feature within the scan for calibrating the scan amplitude, said method being effective at the operating frequency of the electron beam scan, but using a limited bandwidth video signal, comprising the steps of:

determining an edge over which the video signal changes from one level to a higher or lower level as a reference feature;

turning on the electron beam over only a short region of the electron beam scan; and

representing as the total video signal accumulated the degree of overlap between the beam on portion of the scan and the higher video level part of the feature.

5. **(amended)** The method of Claim 1, further wherein the steps include: using the high to low, low to high video transition as a reference feature; unblanking the electron beam for a short period during the scan; advancing the unblank-blanked period along the line by a small increment each succeeding scan;

sampling the video amplifier output using an analog-to-digital converter at a time delay following the unblank-blanked period, said time delay determined by the video amplifier bandwidth; and

a means of stepping the unblank-blanked period along the line by sub pixel increments by inserting a programmable delay between the blanking pulse generator and the blanker itself.
